What is claimed is:

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1. An optical waveguide lens for collimating or focusing a light beam, the light beam having a mode field diameter measured at a beam waist when the light is transmitted through the optical waveguide lens into free space, the optical waveguide lens comprising:

an optical waveguide having an end through which the light propagates and a diameter; and

a lens member connected to and extending from the end of the optical waveguide, the lens member having a throat portion and a generally spherical lens portion, the throat portion having a cross-sectional dimension substantially greater than the diameter of the optical waveguide.

2. The optical waveguide lens of claim 1 wherein the optical waveguide has a core and a cladding, the core being fabricated from a doped glass having a softening point, and wherein the lens member is fabricated from a generally homogenous glass having a softening point less than the softening point of the core of the optical waveguide.

3. The optical waveguide lens of claim 1 wherein the lens member is fabricated from a generally homogenous glass including a borosilicate glass.

4. The optical waveguide lens of claim 1 wherein the lens member is fabricated from a 4 mole percent borosilicate glass.

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5. The optical waveguide lens of claim 1 wherein the optical waveguide has a diameter on the order of 125 microns and the cross-sectional dimension of the throat portion is greater than 135 microns.

6. The optical waveguide lens of claim 1 wherein the optical waveguide has a diameter on the order of 125 microns and the cross-sectional dimension of the throat portion is greater than 200 microns.

7. The optical waveguide lens of claim 1 wherein the cross-sectional dimension of the throat portion of the lens member is about 1.5 or more times diameter of the optical waveguide.

8. The optical waveguide lens of claim 1 wherein the mode field diameter of the light beam measured at the beam waist is greater than 30 microns.

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9. The optical waveguide lens of claim 1 wherein the mode field diameter of the light beam measured at the beam waist is greater than 120 microns.

10. The optical waveguide lens of claim 1 wherein the mode field diameter of the light beam measured at the beam waist is greater than 200 microns.

11. The optical waveguide lens of claim 1 wherein the mode field diameter of the light beam measured at the beam waist is greater than 500 microns.

12. The optical waveguide lens of claim 1 wherein the mode field diameter of the light beam measured at the beam waist is between 200 and 800 microns.

13. The optical waveguide lens of claim 1 wherein the optical waveguide is selected from a group consisting of a single-mode optical fiber, a multi-mode optical fiber, a polarization-maintaining optical fiber, a dual-core optical fiber, a separable-core optical fiber, a circular cross-section optical fiber, and a non-circular cross-section optical fiber.

14. The optical waveguide lens of claim 1 wherein the optical waveguide is a first optical waveguide, the optical waveguide lens further comprising:

a second optical waveguide connected to and extending from the throat portion of the lens member, the second optical waveguide being generally parallel with the first optical waveguide.

15. The optical waveguide of claim 14 wherein the first optical waveguide and the second optical waveguide each have a length and are spaced apart a distance from one another generally along the length thereof.

16. The optical waveguide of claim 14 wherein the first optical waveguide and the second optical waveguide each have a length and are in contact with one another generally along the length thereof

17. The optical waveguide of claim 14 wherein the first optical waveguide and the second optical waveguide are in contact and formed integrally with one another, the first optical fiber being selectively separable from the second optical fiber along at least a portion thereof.

18. An optical waveguide lens for collimating or focusing a light beam, the optical waveguide lens comprising:

an optical waveguide having a core, a cladding, and an end through which the light propagates, the core being fabricated from a glass having a softening point; and

a lens member connected to and extending from the end of the optical waveguide, the lens member having a generally spherical lens portion, the lens member being fabricated from a glass having a softening point that is less than the softening point of the core of the optical waveguide.

19. The optical waveguide lens of claim 18 wherein the optical waveguide has an axis, and the lens member has a generally uniform refractive index which does not vary in a radial direction measured relative to the axis of the optical waveguide.

20. The optical waveguide lens of claim 18 wherein the lens member is fabricated from a generally homogenous borosilicate glass.

21. The optical waveguide lens of claim 20 wherein the lens member is fabricated from a 4 mole percent borosilicate glass.

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22. A method for fabricating an optical waveguide lens for collimating or focusing a light beam, the method comprising the steps of:

providing an optical waveguide having an end through which the light beam is transmitted, a diameter, and an axis;

providing a lens blank, the lens blank having a face defining a cross-sectional dimension substantially greater than the diameter of the optical waveguide, the lens blank having a softening point;

attaching the lens blank to the optical waveguide such that the end of the optical fiber contacts and is fused to the face of the lens blank;

heating a portion of the lens blank above the softening point;

applying tension to the lens blank such that the lens blank is drawn and separated to form a tapered distal end connected to and extending from the optical waveguide; and

heating the tapered distal end of the lens blank above the softening point such that a generally spherical lens portion having a diameter is formed in general alignment with the axis of the optical waveguide and through which the light beam is transmitted, and such that a throat portion of the lens blank disposed between the optical waveguide and the generally spherical lens portion has a cross-sectional dimension substantially greater than the diameter of the optical waveguide and substantially less than the diameter of the generally spherical lens portion.

23. The method of claim 22 wherein the lens blank is a generally homogenous borosilicate glass.

24. The method of claim 23 wherein the lens blank is a 4 mole percent borosilicate glass.

25. A method for fabricating an optical component wherein a light beam propagates through free space relative to an optical device, the method comprising the steps of:

providing an optical waveguide lens including an optical waveguide having a diameter and an axis, a throat portion connected to and extending from the optical waveguide, the throat portion having a cross-sectional dimension substantially greater than the diameter of the optical waveguide, and a generally spherical lens portion connected to and extending from the throat portion, the generally spherical lens portion having a diameter substantially greater than the cross-sectional dimension of the throat portion;

positioning the optical waveguide lens relative to the optical device such that the light beam propagates either from the optical waveguide lens to the optical device or from the optical device to the optical waveguide lens or both; and

securing the optical waveguide lens relative to the optical device.

26. The method of claim 25 wherein the optical waveguide has a core fabricated from a glass material having a softening point, the optical waveguide lens being fabricated from a glass material having a softening point which is less than the softening point of the core.

27. The method of claim 25 wherein the optical waveguide lens is fabricated from a borosilicate glass material.

28. The method of claim 27 wherein the optical waveguide lens is fabricated from a 4 mole percent borosilicate glass.

29. The method of claim 25 wherein the optical waveguide lens collimates the light beam propagating from the optical waveguide into the free space

30. The method of claim 25 wherein the optical waveguide lens focuses the light beam propagating from the free space into the optical waveguide

31. The method of claim 25 wherein the optical device is a passive optical component.

32. The method of claim 25 wherein the optical device is an active optical component.

33. The method of claim 25 wherein the optical device is selected from a group consisting of a multiplexing component or a demultiplexing component.

34. The method of claim 25 wherein the optical device is selected from a group consisting of a switch component, a router component, or an optical add/drop component.

35. A method for fabricating an optical waveguide lens assembly comprising the steps of:

providing an optical waveguide having a diameter and a distal end;

providing a ferrule defining a bore extending therethrough, the bore having a diameter equal to or greater than the diameter of the optical waveguide, the ferrule having an end surface;

inserting the optical waveguide through the bore such that a segment of the distal end of the optical waveguide is exposed;

forming a lens member on the distal end of the optical waveguide, the lens member including a generally spherical portion;

retracting the optical waveguide through the bore such that a portion of the lens member contacts the end surface of the ferrule; and

securing the optical waveguide in position relative to the ferrule.

36. A method for fabricating a plurality of generally spherical lenses each having a mounting post extending therefrom, the method comprising the steps of:

providing an elongated stock of a glass material from which the plurality of generally spherical lenses are to be formed, the glass material having a softening point, the elongated stock having a distal end and a cross-sectional dimension;

forming a generally spherical lens on the distal end of the elongated stock by heating the glass material above its softening point such that a portion of

the elongated stock forms the spherical lens due in part to a surface tension of the glass material, the generally spherical lens having a diameter substantially greater than the cross-sectional dimension of the elongated stock;

separating the generally spherical lens and a segment of the elongated stock connected to the generally spherical lens from a remaining portion of the elongated stock, such that the segment of the elongated stock connected to the generally spherical lens forms the mounting post for the generally spherical lens; and

repeating the forming step and the separating step to fabricate the plurality of generally spherical lenses each having the mounting post extending therefrom.

37. A pump multiplexer for combining a first optical signal from a pump light source with a second optical signal from a transmission waveguide into a common optical waveguide, the pump multiplexer comprising:

a first input waveguide having an end, the first input waveguide being optically coupled to the pump light source;

a second input waveguide having an end, the second input waveguide being optically coupled to the transmission waveguide;

a birefringent material having a first face and a second face, the end of the first input waveguide and the end of the second input waveguide being disposed generally confronting and in optical alignment with the first face of the birefringent material; and

an output waveguide having an end, the output waveguide being optically coupled to the common optical waveguide, the end of the output waveguide being disposed generally confronting and in optical alignment with the second face of the birefringent material, wherein at least one of the first input waveguide, the second input waveguide, or the output waveguide having a generally spherical lens formed on the end thereof.

38. The pump multiplexer of claim 37 wherein a corresponding one of the first input waveguide, the second input waveguide, or the output waveguide to which the generally spherical lens is attached has a diameter, the generally spherical lens including a throat portion having a cross-sectional dimension substantially greater than the diameter of the corresponding one of the first input waveguide, the second input waveguide, or the output waveguide to which the generally spherical lens is attached, and a generally spherical portion having a diameter substantially greater than the cross-sectional dimension of the throat portion.

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39. The pump multiplexer of claim 37 wherein a corresponding one of the first input waveguide, the second input waveguide, or the output waveguide to which the generally spherical lens is attached has a core fabricated from a glass material having softening point, the generally spherical lens being fabricated from a glass material having a softening point which is less than the softening point of the core.

40. The pump multiplexer of claim 39 wherein the generally spherical lens is fabricated from a borosilicate glass material.

41. An optical waveguide lens for collimating or focusing a light beam comprising:

an optical waveguide having an end through which the light propagates and a diameter; and

a lens member connected to and extending from the end of the optical waveguide, the lens member having a generally spherical lens portion, the lens member being fabricated from a borosilicate glass.